

Math 0430: Introduction to Abstract Algebra

Class Times: TuTh 4:00PM–5:15PM (1045 Benedum Hall).

Professor: Bogdan Ion; *email:* bion@pitt.edu; *office:* 423 Thackeray Hall.

Office Hours: TuTh 3:00PM–4:00PM or by appointment in 423 Thackeray Hall. Zoom office hours (meeting id: 964 7209 8053), by appointment.

Textbook: *Abstract Algebra. Theory and Application* by Thomas W. Judson. Edition 2022. The textbook is freely available at <http://abstract.pugetsound.edu>

Web Site: Announcements and handouts will be posted at <http://sites.pitt.edu/~bion/0430.html>

Prerequisites: Math 0413 or Math 0450 or Math 1185. I will assume familiarity with set theory as a descriptive language and with the semantics and syntax of proof.

Course description: The course is an introduction to modern abstract algebra. We will introduce the algebraic concepts of group, ring, and field, establish their basic properties, and investigate several classes of examples. Highlights of the course include: the theorems of Lagrange, Fermat, and Euler, Cayley's theorem, isomorphism theorems for groups and rings, the Chinese remainder theorem, Bezout's theorem.

Grading Policy: The final grade will be computed from the following

Homework	30%
Exam 1	30%
Exam 2	40%

The grades will **not be curved**. *Roughly*, the following grading scale will apply:

A: 90-100, B: 80-90, C: 70-80, D: 55-70.

The homework will consist of weakly assignments which will have to be turned in on dates to be specified in class. Late homework is not accepted. In order to be graded all writings must be coherent, legible and submitted in the following format:

1. Do the problems on 8.5"x11" paper in the assigned order, writing only on one side of each sheet - with the assignment and your name written at the top of the first page.
2. For each assigned problem, first state or copy the problem precisely as given in the text, then give its solution. No credit is given for a solution to a misstated assigned problem.
3. Write effectively, with due attention to organization and logical progression of ideas. Each solution should be complete and appropriately supported - by relevant observations, argumentation, drawings etc. - but direct and to the point. The paper should be easily readable by your peers.

Examination schedule:

Exam 1	Thursday, October 16, 4:15-5:15PM
Exam 2	Thursday, December 11, 2:00–3:50PM

There are no make-up exams. You may not be excused from an exam, except in the event of a documented emergency, and then only with my permission. Note that travel is *not* a sufficient excuse to have an exam scheduled on a different day.

Other Important dates:

Labor Day	Monday, September 1
Add/drop period ends	Friday, September 5
Monitored withdrawal deadline	Friday, October 24
Thanksgiving Recess	Monday – Friday, November 24–28
Last Class	Thursday, December 5

Accommodations and schedule conflicts:

If you have a disability for which you are or may be requesting an accommodation, you are encouraged to contact both me and Disability Resources and Services, 216 William Pitt Union, (412)648-7890/(412)383-7355 (TTY), before the end of the second week of classes. Similarly, students who have any conflicts (including religious observances) with the scheduled examination dates should notify me before the end of the second week of classes.

University of Pittsburgh e-mail Policy 09-10-01:

Each student is issued a University e-mail address (username@pitt.edu) upon admittance. This e-mail address may be used by the University for official communication with students. Students are expected to read e-mail sent to this account on a regular basis. Failure to read and react to University communications in a timely manner does not absolve the student from knowing and complying with the content of the communications. The University provides an e-mail forwarding service that allows students to read their e-mail via other service providers (e.g., Hotmail, AOL, Yahoo). Students that choose to forward their e-mail from their pitt.edu address to another address do so at their own risk. If e-mail is lost as a result of forwarding, it does not absolve the student from responding to official communications sent to their University e-mail address. The link to this policy is located at: <http://www.bc.pitt.edu/policies/policy/09/09-10-01.html>. Instructions on how to forward e-mail messages are at: <http://www.technology.pitt.edu/email-accounts/email/imap/imap-forward.html>